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DEPT. OF ENVIRONMENTAL  
CONSERVATION

# BGES, INC.

Environmental Consultants



**LOTS 8A, 10, 11, AND 12, BLOCK 26A, EAST ADDITION  
ANCHORAGE, ALASKA**

## GROUNDWATER SAMPLING

NOVEMBER 2004

Submitted to:

PAUL MANEY

Submitted by:

BGES, INC.

P.O. Box 110126  
Anchorage, Alaska 99511-0126  
(907) 644-2900  
Eagle River Office  
(907) 696-2437

04-038-02

USEPA SF



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## 1.0 INTRODUCTION

BGES, Inc. (BGES) was retained by Mr. Paul Maney, owner of the subject property, to conduct groundwater sampling at the site located at Fourth Avenue, between Hyder Street and Gambell Street, in Anchorage, Alaska, (Figure 1). The purpose of this sampling was to assess the groundwater quality at the subject site. The fieldwork for this sampling was performed on October 22, 2004, in accordance with our work plan dated October 4, 2004, and approved by the Alaska Department of Environmental Conservation (ADEC) on October 19, 2004. The site is an active Contaminated site (ADEC Reckey No.:2004210926001).

## 2.0 BACKGROUND

The property is located in the downtown (northern) portion of Anchorage, Alaska (Figure 1). The legal description of the property is Lots 8A, 10, 11, and 12, Block 26A, East Addition. The site is currently undeveloped and used as a parking lot for the Anchorage Job Center. The surface at the property is unpaved and generally level. An Alaska Communications System antenna tower is situated on the southeast portion of the property. The property was formerly occupied by a variety of businesses, including C&K Cleaners (which may have been a drycleaners) from approximately 1968 through 1970, and NC Tire Center, which was the last occupant of the building on site. Figure 2 shows the layout of the subject property.

## 3.0 PREVIOUS SITE WORK

A Phase I ESA was conducted at the subject property in 1993. The findings of the Phase I ESA indicated that underground storage tanks (USTs) were thought to exist at locations in the northeast corner of the property [where we did subsequently encounter USTs as described in our September 2004 Phase II Environmental Site Assessment (ESA) Report], and in the north-central portion of the property, where USTs were not encountered during our subsurface assessment.

A Phase II ESA was reportedly conducted approximately 5 years ago, but the results have not been made available to the current property owner, Paul Maney. It is Mr. Maney's understanding that several USTs were removed and at least one monitoring well was installed. A Phase II ESA was conducted by BGES during the summer of 2004. This site assessment included excavation of six exploratory test pits with associated soil sampling and removal of five hydraulic lifts and two associated hydraulic USTs and two heating oil USTs. A relatively small volume of soils with hydrocarbon concentrations exceeding ADEC cleanup criteria were encountered during removal of the hydraulic lifts and associated USTs. The test pit excavations revealed numerous soil samples with tetrachloroethylene (PCE) concentrations exceeding the ADEC cleanup criterion. In addition, during this assessment, BGES observed an existing monitoring well at the property. The sampling

of this well is the subject of this report as described below.

#### 4.0 OCTOBER 2004 SAMPLING AND ANALYSIS

BGES traveled to the site on October 22, 2004 to sample the monitoring well, designated MW-1. The weather conditions were mostly sunny and cool (approximately 38 degrees Fahrenheit). The construction details of the monitoring well are unknown, however, the depth to water was measured prior to purging the well for sampling, and found to be 38.77 feet below grade (bg) and the total depth of the monitoring well was measured at 44.60 feet bg. These measurements were made using a decontaminated electronic water level indicator. The water level indicator was decontaminated by washing in an Alconox (laboratory-grade detergent) solution, followed by a distilled water rinse prior to use.

The volume of water in the well was calculated based on the water elevation and total depth of the well. The well was purged using a disposable, polyethylene bailer. Upon removal of each well volume, measurements of pH, conductivity, turbidity, dissolved oxygen, temperature, salinity, total dissolved solids, and oxidation-reduction potential (ORP) were made by pouring the water into a clean container and utilizing a Horiba U22.23 water quality meter. The well was purged of approximately three well volumes, until field parameters indicated relative stability of the aquifer. The field data gathered during purging are listed in Table 1.

The purge water was collected in a 5-gallon bucket. Because of the absence of any sheen, the water from the 5-gallon bucket was discharged to the ground surface in accordance with our ADEC-approved work plan. Sampling personnel wore a new pair of latex gloves when sampling the well. The groundwater sample was collected from the monitoring well with the same disposable bailer that was used to purge the well. The water was discharged from the bailer directly into the laboratory-supplied sample jars.

The groundwater sample collected from the monitoring well was designated for volatile organic compounds (VOCs) analyses by SW8260. As a quality control measure, a trip blank prepared by the laboratory accompanied the sample jars during the entire transportation and sampling process. The samples were hand-delivered in a chilled cooler under chain of custody protocol to SGS Laboratory in Anchorage.

#### 5.0 EVALUATION OF CURRENT LABORATORY DATA

The analytical results are compared to ADEC 18AAC 75 Table C cleanup criteria (0.005 mg/L for PCE). The groundwater sample from MW-1 exhibited a PCE concentration of 2.280 mg/L, which exceeds the ADEC cleanup criterion of 0.005 mg/L by four orders of magnitude. All other analytes

had non-detectable concentrations. The trip blank sample had non-detectable concentrations of all analytes, indicating that cross-contamination between samples is not likely to have occurred.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

A groundwater sample was collected from the existing monitoring well at the site. The groundwater sample was analyzed for VOCs, and exhibited a PCE concentration of 2.280 mg/L. This value is considerably above the applicable ADEC cleanup criterion. Based on previous PCE detections in soils at the property, it is likely that a previous release at the subject property contributed at least in part to the PCE in the groundwater. However, insufficient information exists at the present time to determine if some of the PCE detected in groundwater is from an off-site source.

It is recommended that a copy of this report be provided to the ADEC for their review. After their review, it is recommended that a meeting be set up to discuss what, if any, additional action is required for this site. At a minimum, it is recommended that the monitoring well continue to be sampled on a quarterly basis to evaluate seasonal contaminant trends at the site.

## 7.0 EXCLUSIONS AND CONSIDERATIONS

This report presents facts, observations, and inferences based on conditions observed during the period of our project activities, and only those conditions that were evaluated as part of our scope of work. Our conclusions and recommendations are based on our observations and the results of our research, and as such, rely on the accuracy of the documents that were reviewed and the information provided by the individuals that were interviewed. Changes to site conditions may have occurred since we completed our initial project activities. These changes may be from the actions of man or nature. Changes in regulations may also impact the interpretation of site conditions. BGES will not disclose our findings to any parties other than our client as listed above, except as directed by our client, or as required by law.

Prepared by:

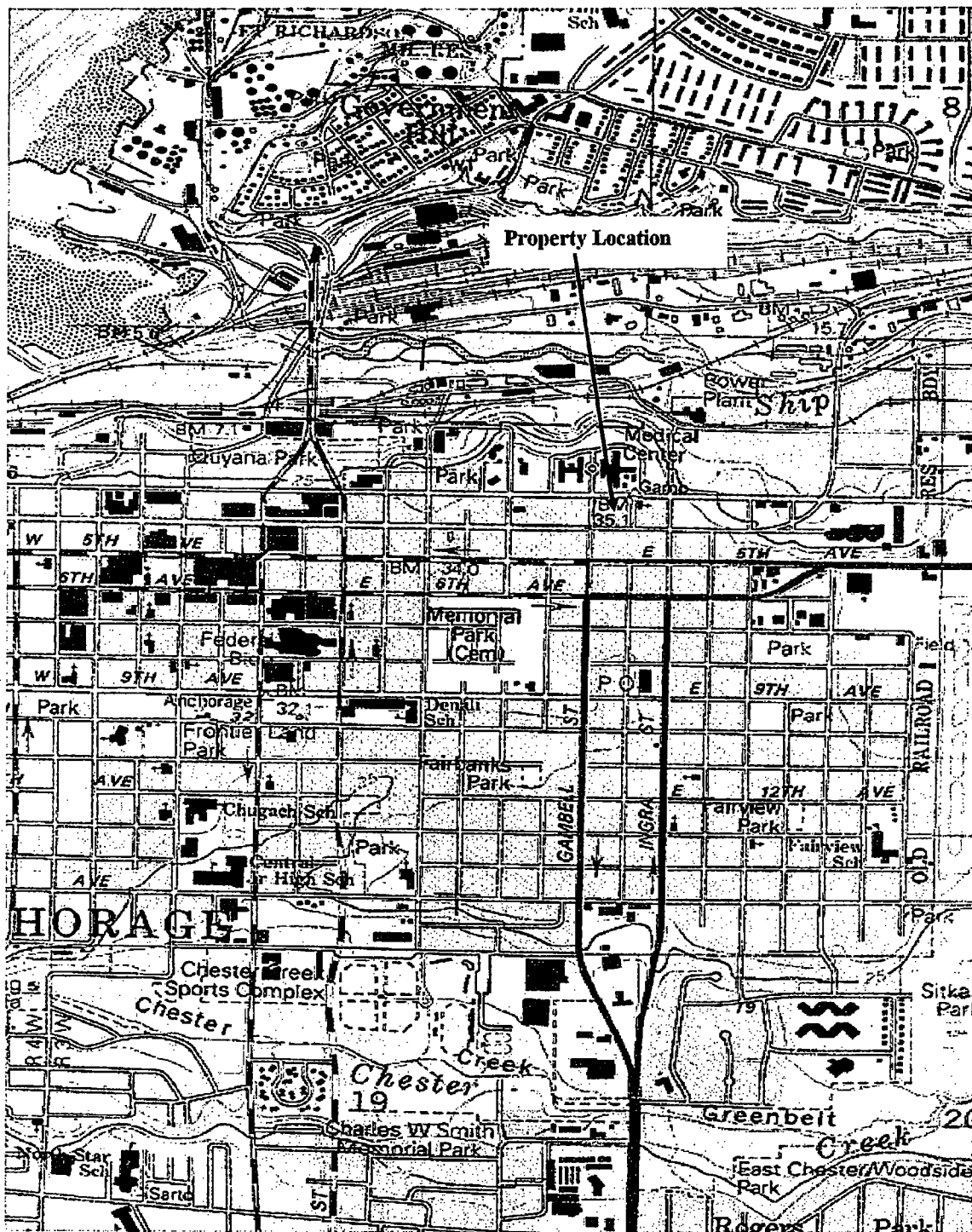
*Robert N. Braunstein*

Robert N. Braunstein, C.P.G.  
Principal Geologist

Reviewed by:

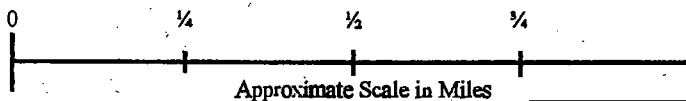
*Keith O. Guyer*

Keith O. Guyer, R.G.  
Principal Geologist



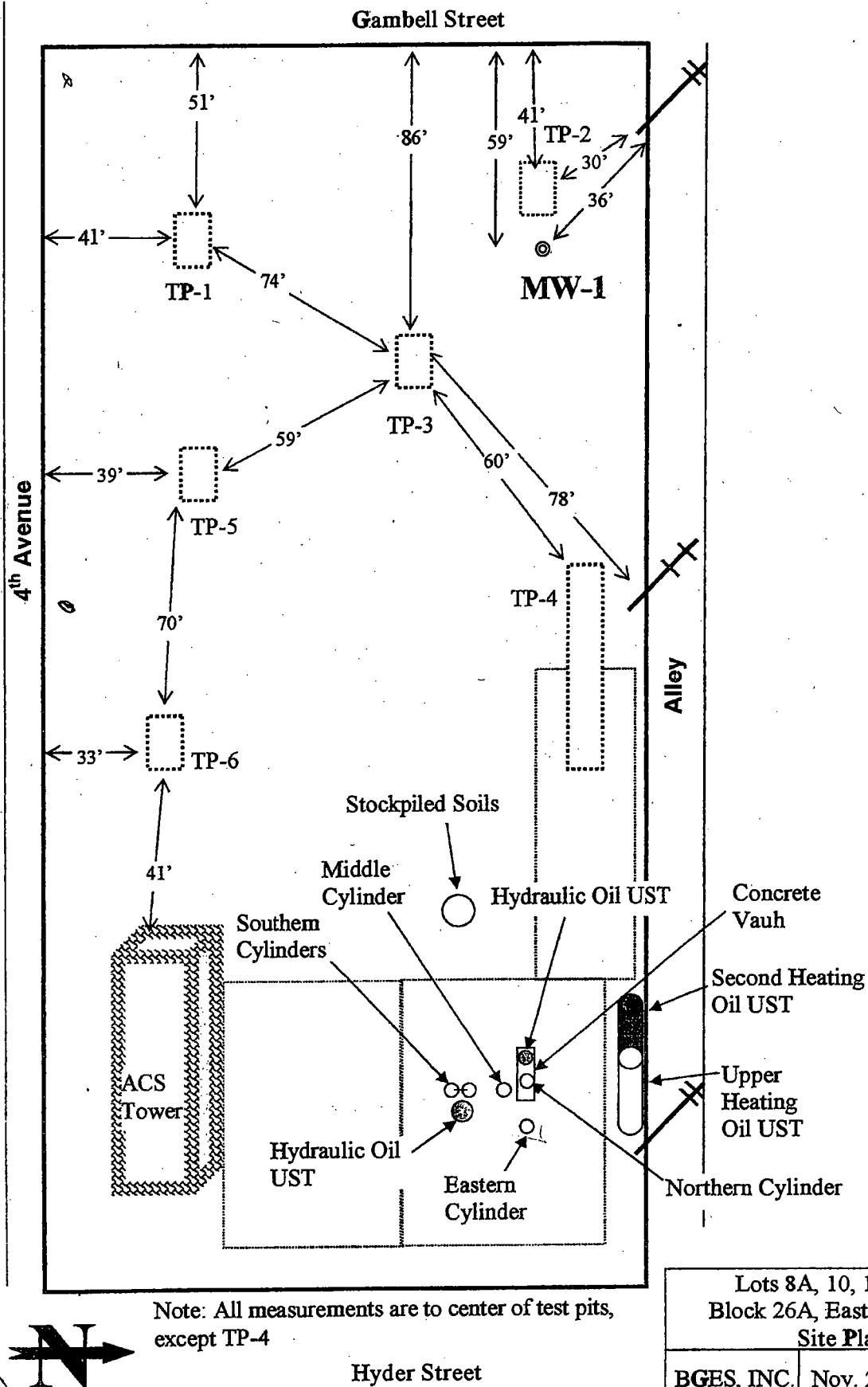
Source: USGS Map, Anchorage (A-8) NW, Alaska 1979, Revised 1994.

Note: Contour Interval is 5 Meters



Lots 8A, 10, 11, and 12; Block 26A  
East Addition  
**SITE VICINITY MAP**

BGES, INC. November 2004 Figure 1



Note: All measurements are to center of test pits, except TP-4

Lots 8A, 10, 11, and 12  
Block 26A, East Addition  
Site Plan

BGES, INC.

Nov. 2004

Figure 2



TABLE 1  
LOTS 8A, 10, 11, AND 12, BLOCK 26A, EAST ADDITION  
WATER SAMPLING LOG  
OCTOBER 2004

Well Number	MW-1
Date Sampled	October 22, 2004
Time of Depth to Water Measurement	16:00
Time Sample Collected	16:53
Depth to Water (feet below top of casing)	38.77
Total Depth of Well (feet below top of casing)	44.60
Well Casing Diameter (Inches)	2
Standing Water Well Volume (gallons)	0.95
Purge Volume-Actual (gallons)	3
Temperature (degrees-Celsius)	8.80 / 7.21 / 7.02
pH (standard units)	5.45 / 6.31 / 6.32
Conductivity (microsiemens per centimeter)	0.684 / 0.664 / 0.680
Turbidity (Nephelometric Turbidity Units)	340 / 250 / 570
Dissolved Oxygen (grams per liter)	14.93 / 15.42 / 15.34
Salinity (percent)	0 / 0 / 0
Total Dissolved Solids (grams per liter)	0.459 / 0.426 / 0.435
Oxidation-Reduction Potential (millivolts)	305 / 310 / 314

Notes: Weather conditions on October 22, 2004 were mostly sunny and cool (approximately 38 degrees Fahrenheit). Wells purged and sampled using a disposable polyethylene bailer. Units separated by / indicate readings for successive well volumes removed.

Samplers: Keith Guyer and Robert Braunstein

Field measurements made with a Horiba U22.23 Water Quality Meter

**APPENDIX A**  
**LABORATORY ANALYTICAL RESULTS**



## Laboratory Analysis Report

200 W. Potter Drive  
Anchorage, AK 99518-1605  
Tel: (907) 562-2343  
Fax: (907) 561-5301  
Web: <http://www.sgsenvironmental.com>

Keith Guyer  
BGES Inc.  
P.O. Box 110126  
Anchorage, AK 99511

Work Order: 1047072  
4th & Garabell  
Client: BGES Inc.  
Report Date: November 05, 2004

Enclosed are the analytical results associated with the above workorder.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by SGS. A copy of our Quality Control Manual that outlines this program is available at your request. The laboratory ADEC certification numbers are AK08-03 (DW), UST-003 (CS) and AK00971 (Micro).

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS Quality Assurance Program Plan and the National Environmental Laboratory Accreditation Conference.

If you have any questions regarding this report or if we can be of any other assistance, please call your SGS Project Manager at (907) 562-2343.

The following descriptors may be found on your report which will serve to further qualify the data.

PQL	Practical Quantitation Limit (reporting limit).
U	Indicates the analyte was analyzed for but not detected.
F	Indicates an estimated value that falls below PQL, but is greater than the MDL.
J	The quantitation is an estimation.
B	Indicates the analyte is found in a blank associated with the sample.
*	The analyte has exceeded allowable regulatory or control limits.
GT	Greater Than
D	The analyte concentration is the result of a dilution.
LT	Less Than
I	Surrogate out of control limits.
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
JL	The analyte was positively identified, but the quantitation is a low estimation.
E	The analyte result is high outside of calibrated range.

Note: Soil samples are reported on a dry weight basis unless otherwise specified

**SGS**

SGS Ref.# 1047072001  
 Client Name BGES Inc.  
 Project Name/# 4th & Gambell  
 Client Sample ID MW-1  
 Matrix Water (Surface, Eff., Ground)

All Dntes/Times are Alaska Standard Time  
 Printed Date/Time 11/05/2004 7:24  
 Collected Date/Time 10/22/2004 16:53  
 Received Date/Time 10/22/2004 17:17  
 Technical Director Stephen C. Ede

Released By *Shawn Poston*

## Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
Dichlorodifluoromethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Chloromethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Vinyl chloride	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Bromomethane	3.00 U	3.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Chloroethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Trichlorofluoromethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,1-Dichloroethene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Methylene chloride	5.00 U	5.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Carbon disulfide	2.00 U	2.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Acetone	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
trans-1,2-Dichloroethene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,1-Dichloroethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
2,2-Dichloropropane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
cis-1,2-Dichloroethene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Bromochloromethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
2-Butanone (MEK)	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Chloroform	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,1,1-Trichloroethane	1.00 U	1.00	ng/L	SW8260B	A		10/29/04	10/29/04	RMV
Carbon tetrachloride	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,1-Dichloropropene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Benzene	0.400 U	0.400	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,2-Dichloroethane	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Trichloroethene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,2-Dichloropropane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Dibromomethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Bromodichloromethane	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
2-Chloroethyl Vinyl Ether	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
cis-1,3-Dichloropropene	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Toluene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
trans-1,3-Dichloropropene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,1,2-Trichloroethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Tetrachloroethene	2280	50.0	ug/L	SW8260B	B		10/29/04	11/02/04	VS



SGS Ref.# 1047072001  
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 Project Name/# 4th & Gambell  
 Client Sample ID MW-1  
 Matrix Water (Surface, Eff., Ground)

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Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
Dibromochloromethane	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,2-Dibromoethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Chlorobenzene	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,3-Dichloropropane	0.400 U	0.400	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Ethylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
P & M -Xylene	2.00 U	2.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Styrene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,1,1,2-Tetrachloroethane	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Bromofom	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Isopropylbenzene (Cumene)	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
o-Xylene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Bromobenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,1,2,2-Tetrachloroethane	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,2,3-Trichloropropane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
n-Propylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
2-Chlorotoluene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
4-Chlorotoluene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,3,5-Trimethylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
tert-Butylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,2,4-Trimethylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
sec-Butylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
4-Isopropyltoluene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,4-Dichlorobenzene	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
n-Butylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,2-Dibromo-3-chloropropane	2.00 U	2.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,2,4-Trichlorobenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Hexachlorobutadiene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Naphthalene	2.00 U	2.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
1,2,3-Trichlorobenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
2-Hexanone	10.0 U	10.0	ug/L	SV8260B	A		10/29/04	10/29/04	RMV
Methyl-t-butyl ether	5.00 U	5.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV

**SGS**

SGS Ref.# 1047072001  
Client Name BGES Inc.  
Project Name/# 4th & Gambell  
Client Sample ID MW-1  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time

Printed Date/Time 11/05/2004 7:24  
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Received Date/Time 10/22/2004 17:17  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Gas Chromatography/Mass Spectroscopy									
1-Chlorohexane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Acrylonitrile	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
trans 1,4-Dichloro-2-Butene	2.00 U	2.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Vinyl acetate	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Methyl iodide	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/29/04	RMV
Surrogates									
Dibromofluoromethane <sur>	94.2		%	SW8260B	A	85-115	10/29/04	10/29/04	BMV
Toluene-d8 <sur>	95.5		%	SW8260B	A	84-113	10/29/04	10/29/04	RMV
4-Bromofluorobenzene <sur>	108		%	SW8260B	A	78-124	10/29/04	10/29/04	RMV
1,2-Dichloroethane-D4 <sur>	95.7		%	SW8260B	A	72-119	10/29/04	10/29/04	RMV

**SGS**

SGS Ref.# 1047072002  
 Client Name BGES Inc.  
 Project Name/# 4th & Gambell  
 Client Sample ID Trip Blank  
 Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time

Printed Date/Time 11/05/2004 7:24  
 Collected Date/Time 10/22/2004 16:53  
 Received Date/Time 10/22/2004 17:17  
 Technical Director Stephen C. Ede

Released By *Shane Poston*

## Sample Remarks:

Parameter	Result	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Gas Chromatography/Mass Spectroscopy									
Dichlorodifluoromethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Chloromethane	1.00 U	1.00	ng/L	SW8260B	A		10/29/04	10/30/04	RMV
Vinyl chloride	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Bromomethane	3.00 U	3.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Chloroethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Trichlorofluoromethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,1-Dichloroethene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Methylene chloride	5.00 U	5.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Carbon disulfide	2.00 U	2.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Acetone	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
trans-1,2-Dichloroethene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,1-Dichloroethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
2,2-Dichloropropane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
cis-1,2-Dichloroethene	1.00 U	1.00	ng/L	SW8260B	A		10/29/04	10/30/04	RMV
Bromochloromethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
2-Butanone (MEK)	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Chloroform	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,1,1-Trichloroethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Carbon tetrachloride	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,1-Dichloropropene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Benzene	0.400 U	0.400	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,2-Dichloroethane	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Trichloroethene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,2-Dichloropropane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Dibromomethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Bromodichloromethane	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
2-Chloroethyl Vinyl Ether	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
cis-1,3-Dichloropropene	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Toluene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
trans-1,3-Dichloropropene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,1,2-Trichloroethane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Tetrahydroethene	1.00 U	1.00	ug/L	SW8260B	B		10/29/04	11/02/04	V



SGS Ref.# 1047072002  
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 Project Name/# 4th & Gambell  
 Client Sample ID Trip Blank  
 Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
 Printed Date/Time 11/05/2004 7:24  
 Collected Date/Time 10/22/2004 16:53  
 Received Date/Time 10/22/2004 17:17  
 Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
Dibromochloromethane	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,2-Dibromoethane	1.00 U	1.00	ug/L	SWS260B	A		10/29/04	10/30/04	RMV
Chlorobenzene	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,3-Dichloropropane	0.400 U	0.400	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Ethylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
P & M -Xylene	2.00 U	2.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,1,1,2-Tetrachloroethane	0.500 U	0.500	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Styrene	1.00 U	1.00	ug/L	SWS260B	A		10/29/04	10/30/04	RMV
Bromoform	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Isopropylbenzene (Cumene)	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
o-Xylene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Bromobenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,1,2,2-Tetrachloroethane	0.500 U	0.500	ug/L	SWS260B	A		10/29/04	10/30/04	RMV
1,2,3-Trichloropropane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
n-Propylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
2-Chlorotoluene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
4-Chlorotoluene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,3,5-Trimethylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
tert-Butylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,2,4-Trimethylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
sec-Butylbenzene	1.00 U	1.00	ug/L	3W8260B	A		10/29/04	10/30/04	RMV
1,3-Dichlorobenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
4-Isopropyltoluene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,4-Dichlorobenzene	0.500 U	0.500	ng/L	SW8260B	A		10/29/04	10/30/04	RMV
1,2-Dichlorobenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
n-Butylbenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,2-Dibromo-3-chloropropane	2.00 U	2.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,2,4-Trichlorobenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Hexachlorobutadiene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Naphthalene	2.00 U	2.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
1,2,3-Trichlorobenzene	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
2-Hexanone	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Methyl-t-butyl ether	5.00 U	5.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV



**SGS**

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Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Volatile Gas Chromatography/Mass Spectroscopy</b>									
1-Chlorohexane	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Acrylonitrile	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
trans 1,4-Dichloro-2-Butene	2.00 U	2.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Vinyl acetate	10.0 U	10.0	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
Methyl iodide	1.00 U	1.00	ug/L	SW8260B	A		10/29/04	10/30/04	RMV
<b>Surrogates</b>									
Dibromofluoromethane <sur>	99.3		%	SWS260B	A	85-115	10/29/04	10/30/04	RMV
Toluene-d8 <sur>	95		%	SWS260B	A	84-113	10/29/04	10/30/04	RMV
4-Bromofluorobenzene <sur>	114		%	SW8260B	A	78-124	10/29/04	10/10/04	RMV
1,2-Dichloroethane-D4 <sur>	101		%	SW8260B	A	72-119	10/29/04	10/30/04	RMV